

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A stack type battery comprising:
a plurality of unit cells stacked in a stack direction to be connected in series;
main circuit tab electrodes disposed at both ends of the stack type battery and extending outward oppositely in a direction intersecting the stack direction;
shared voltage measurement tab electrodes formed on the plurality of unit cells, respectively, to allow voltages to be measured for the plurality of unit cells such that the shared voltage measurement tab electrodes are disposed at deviated positions on a side surface of the stack type battery in a direction intersecting the stack direction; and
a bipolar electrode comprised of a positive electrode active material layer, a current collector and a negative electrode active material layer laminated in this order, the current collector disposed at the both ends of the stack type battery being respectively connected to the main circuit tab electrodes.
2. (Original) The stack type battery according to claim 1, wherein one of adjacent ones of the shared voltage measurement tab electrodes is deviated from the other one of the adjacent ones by a value greater than a width of the other one in the direction intersecting the stack direction.
3. (Original) The stack type battery according to claim 2, wherein the shared voltage measurement tab electrodes are disposed at equidistantly deviated positions.

4. (Original) The stack type battery according to claim 1, wherein the shared voltage measurement tab electrodes are formed on the side surface of the stack type battery in a plurality of rows.

5. (Original) The stack type battery according to claim 1, wherein the shared voltage measurement tab electrodes are further disposed on the other side surface, opposing the side surface of the stack type battery, at deviated positions in the direction intersecting the stack direction.

6. (Original) The stack type battery according to claim 1, wherein adjacent ones of the shared voltage measurement tab electrodes of a plurality of the stack type batteries are mutually connected to allow adjacent ones of the plurality of the unit cells of the plurality of the stack type batteries are correspondingly connected in parallel.

7. (Previously Presented) The stack type battery according to claim 1, wherein the stack type battery further includes an electrolyte layer formed adjacent the bipolar electrode.

8. (Original) The stack type battery according to claim 7, wherein the electrolyte layer includes a polymer solid electrolyte layer and at least one of the positive electrode active material layer and the negative electrode active material layer contains polymer solid electrolyte contained in the polymer solid electrolyte layer.

9. (Original) The stack type battery according to claim 7, wherein the stack type battery includes a lithium ion secondary battery.

10. (Original) The stack type battery according to claim 7, wherein negative electrode active material contained in the negative electrode active material layer includes at least one of metal oxide and composite oxides composed of metal and lithium.

11. (Original) The stack type battery according to claim 7, wherein negative electrode active material contained in the negative electrode active material layer includes carbon.

12. (Original) The stack type battery according to claim 11, wherein the carbon is hard carbon.

13. (Original) The stack type battery according to claim 1, wherein a unit cell controller is connected to the plurality of unit cells for controlling charging voltages of the plurality of unit cells.

14. (Original) The stack type battery according to claim 13, wherein a socket having shared voltage tab connection electrodes is connected to the shared voltage measurement tab electrodes for allowing the unit cell controller to be connected thereto.

15. (Original) The stack type battery according to claim 14, wherein the unit cell controller is formed with the socket in a unitary structure.

16. (Original) The stack type battery according to claim 14, wherein the shared voltage measurement tab electrodes are further disposed on the other side surface, opposing the side surface of the stack type battery, at positions deviated in the direction intersecting the stack direction, and the socket is connected to each of a row of the shared voltage measurement tab electrodes, disposed on the side surface of the stack type battery, and a row of the shared voltage measurement tab electrodes disposed on the other side surface opposing the side surface of the stack type battery.

17. (Original) The stack type battery according to claim 13, wherein the unit cell controller includes a current bypass circuit that, when a voltage of the unit cell exceeds a prescribed level, electrically connects a positive electrode and a negative electrode of the unit cell.

18. (Original) The stack type battery according to claim 17, wherein the current bypass circuit includes an electric element that conducts depending upon a voltage.

19. (Original) The stack type battery according to claim 18, wherein the current bypass circuit further includes resistor element connected to the electric element in series.

20. (Currently Amended) A method of manufacturing a stack type battery, comprising:

stacking a plurality of unit cells in a stack direction to be connected in series;

providing main circuit tab electrodes disposed at both ends of the stack type battery and extending outward oppositely in a direction intersecting the stack direction;

providing shared voltage measurement tab electrodes on the plurality of unit cells, respectively, to allow voltages to be measured for the plurality of unit cells such that the shared voltage measurement tab electrodes are disposed at deviated positions on a side surface of the stack type battery in a direction intersecting the stack direction; and

providing a bipolar electrode comprised of a positive electrode active material layer, a current collector and a negative electrode active material layer laminated in this order, the current collector disposed at the both ends of the stack type battery being respectively connected to the main circuit tab electrodes.